

CLAIMS

1. A fax communication system for communicating fax information between a first fax machine having error correction capability and a second fax machine, the first and second fax machines being coupled to communicate with one another across a packet switching network, comprising:

a network device coupled to receive fax information from the first fax machine for accumulating a portion of the fax information and for stalling the second fax machine while accumulating said portion until said portion is sent to the second fax machine free of errors across the packet switching network to the second fax machine.
2. A system as recited in claim 1 wherein the fax information is transmitted between the first fax machine and the second fax machine in real-time.
3. A system as recited in claim 1 wherein the stalling signal is in the form of a fax cover page.
4. A system as recited in claim 1 wherein the stalling signal is a nonfunctional command.
5. A system as recited in claim 1 wherein the stalling signal is invalid data.
6. A system as recited in claim 1 wherein the network device further for the fax information in the form of packets.
7. A system as recited in claim 1 wherein the fax information includes fax pages with each page comprising one or more blocks having one or more frames and further wherein said network device for accumulating one or more frames of a block as said accumulated portion of fax information.

8. A system as recited in claim 1 wherein the network device is a router.
9. A system as recited in claim 1 wherein the network device further for detecting errors in the accumulated portion of the fax information, for retransmitting said accumulated portion back to the first fax machine, for receiving said accumulated portion, error-free, and for transmitting said error-free portion through the packet switching network to the second fax machine thereby minimizing retransmissions of said portion or any sub-portion thereof of said fax information through the packet switching network to avoid an avalanche effect.
10. A system as recited in claim 1 wherein said network device further includes a digital signal processor for modulating/demodulating the fax information.
11. A system as recited in claim 10 wherein said network device further includes a central processing unit, coupled to the digital signal processor, for accumulating the fax information and for forming from the fax information.
12. A system as recited in claim 11 wherein said network device further includes a memory coupled to the central processing unit for storing the fax information and software means for reading the stored fax information and for transmitting the fax information through the packet switching network.
13. A system as recited in claim 1 wherein said network device is responsive to the fax information received from the first fax machine through an interface defined by the TCP/IP protocol.
14. A system as recited in claim 1 wherein said network device is coupled to the first fax machine through a public switching telephone network.
15. A system as recited in claim 1 wherein said network device is coupled, through the packet switching network, to a receiving network device, coupled to the second fax machine, the receiving network device for transmitting the fax information to the second fax machine and upon detection of errors within the fax

information, for receiving a retransmission of the fax information from the second fax machine and repeating retransmissions until the fax information is transmitted, error free, to the second fax machine.

16. A method for transmitting fax information between a first fax machine having error correction capability and a second fax machine, the first and second fax machines being coupled to communicate with one another across a packet switching network, comprising:

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